

Process for the preparation of alkylaryl compounds

Abstract

5 The preparation of alkylaryl compounds takes place by

- 10 a) reaction of a C₄/C₅-olefin mixture over a metathesis catalyst to prepare a C₄₋₈-olefin mixture comprising 2-pentene, and optional removal of the C₄₋₈-olefin mixture,
- b) removal of from 5 to 100% of the 2-pentene present in stage a) and subsequent reaction over an isomerization catalyst to give a mixture of 2-pentene and 1-pentene which is returned to stage a),
- 15 c) dimerization of the C₄₋₈-olefin mixture obtained in stage b) following removal in the presence of a dimerization catalyst to give a mixture containing C₈₋₁₆-olefins, removal of these C₈₋₁₆-olefins and optional removal of a partial stream thereof,
- 20 d) reaction of the C₈₋₁₆-olefin mixtures obtained in stage c) or of the partial stream with an aromatic hydrocarbon in the presence of an alkylation catalyst to form alkyl aromatic compounds where, prior to the reaction, 0 to 60% by weight, based on the C₈₋₁₆-olefin mixtures obtained in stage c), of linear olefins may additionally be added,
- 25 e) optional sulfonation of the alkyl aromatic compounds obtained in stage d) and neutralization to give alkylarylsulfonates, where, prior to the sulfonation, 0 to 60% by weight, based on the alkyl aromatic compounds obtained in stage d), of linear alkylbenzenes may additionally be added if no admixing has taken place in stage d),
- 30 f) optional mixing of the alkylarylsulfonates obtained in stage e) with 0 to 60% by weight, based on the alkylarylsulfonates obtained in stage e), of linear alkylarylsulfonate, if no admixing has taken place in stages d) and
- 35 e).